Credit Risk Management in an Asset-Based Lending Environment

by James Heitmann

The need to monitor the performance of collateral on an ongoing basis makes asset-based lending labor intensive, often requiring a significant investment in information systems and specialized personnel who have intimate knowledge of the borrower’s business. Here is how it’s handled at GMAC.

Credit risk management has improved with age. In the past 10 years, in fact, improved analytics, derivative and structured credit products, and growing liquidity for loans in the secondary market have brought a healthy glow to the field. And now techniques long used for managing large corporate borrowers are successfully being applied to middle-market lending.

Financial services companies—such as GMAC, whose portfolio of commercial credit risk is made up primarily of asset-based loans (ABL)—face particular challenges that require a slightly modified approach to measuring and monitoring credit risk. Unlike traditional cash-flow-based bank loans, ABL relies less on the borrower’s financial and operational performance and more on the quality of the underlying collateral.

The GMAC Credit Risk Management Framework

With assets exceeding $275 billion, GMAC ranks among the 10 largest U.S. banks. While GMAC competes with commercial banks in many different markets, as an asset-based lender GMAC markets its financial services primarily to small to mid-size borrowers that have limited access to the capital markets for financing. The loans are generally illiquid and highly structured. In addition, the borrowers tend to be highly specialized. A large financial services firm, GMAC has products and markets that are extremely heterogeneous and diversified. Thus, the credit risk management framework needs to be extremely flexible to be applicable across all business lines. At the same time, while GMAC has aimed to develop a common framework across all its credit-granting activities, the framework also needs to have the capability of being tailored, when necessary, to be relevant to all the businesses. The need for this flexibility is extremely important within the context of asset-based lending, which frequently involves fairly complex structures with a wide variety of different collateral types.

The GMAC credit risk framework is based on a uniform risk-rating scale that ultimately will be applied to all subsidiaries and that seeks to harmonize all commercial and retail credit activities across the corporation. A new 23-grade scale—designed to closely mimic those of the major commercial credit rating agencies—is based on the notion of expected loss and provides the granularity necessary to effectively measure true credit risk.
risk exposure. Over time, GMAC plans to use the same risk-rating scale to assign both borrower and facility ratings to all of its lending transactions. A clear benefit of the universal scale is that it enables apples-to-apples comparisons across different borrowers, businesses, and product lines, which is critical to good credit risk management. The goal is to create the basis for firm-wide credit portfolio management.

The Challenges

An asset-based loan is usually secured by a borrower’s accounts receivable, inventory, equipment, or other tangible asset. ABL is generally designed to address borrowers’ short-term financing needs by allowing them to monetize the assets on their balance sheets and thus accelerate their cash collection cycle. The typical candidate for an asset-based loan is the small to medium-sized firm that is more often than not thinly capitalized but has a strong asset base. Other good candidates for this form of financing include companies in cyclical industries and newer firms lacking a sufficiently long operating history to qualify for conventional bank financing.

While the quality of the borrower is important—liquidation of the collateral is never seen as the primary source of repayment on the loan—an asset-based lender focuses on the quality, liquidity, and performance of the borrower’s asset base coupled with the length of time required to turn the assets into cash.

The basics. In the standard asset-based deal, the borrower is provided with a revolving credit facility that may be drawn down to any amount up to a specified percentage of the value of the eligible collateral. The amount of eligible collateral that the lender is willing to advance against at any time is called the borrowing base. Understandably, the borrowing base will fluctuate up and down as inventory is sold and receivables are turned into cash. The amount advanced by the lender will vary based on the quality and performance of the collateral, providing the lender with a cushion in the event that the borrower is unable or unwilling to pay and the underlying security needs to be liquidated. Typically, there is a direct relationship between the quality of the collateral and the advance rate employed by the lender. One key challenge from a credit-risk-modeling perspective is developing a methodology for rating facilities that is robust enough to accommodate the unique structural aspects of an ABL transaction. Typically, ABL transactions are highly structured. This makes it difficult for any off-the-shelf products to work.

Although many large banks offer ABL to their customers, the market has traditionally been dominated by nonbank entities—like GMAC—that have less regulatory
overhead and can assume a higher level of risk. Because of the need to monitor the performance of the collateral on an ongoing basis, ABL is extremely labor intensive, often requiring a significant investment in information systems and specialized personnel who have intimate knowledge of the borrower’s business. Lending against medical receivables or equipment, for example, requires a particularly high degree of specialization that poses special challenges from a modeling perspective.

Different from factoring. An advantage of ABL, compared to, for instance, the closely related notion of “factoring,” is that the borrower can generate working capital without the need to relinquish ownership control of the asset. In factoring, by contrast, the factor purchases the business’s invoices outright at a discount and then is responsible for turning them into cash. Generally, the borrower’s customers will never even know of the assignment of inventory to the lender. In this way, ABL maintains the relationship between the borrower and the customer.

Credit Risk Management for Asset-Based Lending

The need for tailor-made methodologies. The need for a common process to assign risk ratings across all of GMAC’s credit-granting activities led to model-driven borrower and facility risk-rating tools to ensure that GMAC’s ratings are being objectively and consistently applied. The approach selected provides flexibility to each business, which has some discretion in assigning the borrower risk rating while providing a common methodological framework for determining the facility rating. The unique nature of GMAC’s borrowers has rendered only limited value to third-party risk-rating models, which often 1) require information not generally applicable to GMAC’s customer base, such as equity prices or loan spreads, or 2) are too generalized to truly capture the underlying creditworthiness of the borrowers.

As a result of these shortcomings, GMAC developed its own internal risk-rating models and methodologies, which can be explicitly tailored to the markets served. For example, there are separate risk-rating models for mortgage banks, auto dealers, and residential home builders. Although the purpose of these models is ultimately to establish a probability of default for the borrower, they also introduce an added level of rigor to the ratings process by holding up all borrowers to consistent and objective standards.

CARRS. At the core of all GMAC’s commercial-credit-related initiatives is the credit analysis and risk return system (CARRS), a Web-based software application that provides a common framework and platform for measuring and managing GMAC’s commercial credit risk exposure. CARRS contains a wide assortment of tools and scoring models that let each business risk-rate its individual borrowers and facilities. Additionally, CARRS is designed to calculate various measures of risk-adjusted performance, including economic value and risk-adjusted return on capital (RAROC) at both the individual transaction and portfolio levels. The CARRS system also facilitates client management and reporting through its centralized repository for enterprise-wide borrower information. The system helps compare individual borrowers or portfolios of borrowers on a risk/return basis. It also allows for portfolio reporting and stress testing while at the same time providing the potential to streamline the overall credit process.

Given the lack of external risk-rating information on the majority of ABL borrowers, the development of good credit-scoring models posed a variety of different challenges. Various operating units each used a different ratings scale, and all the scales tended to be qualitatively based, highly subjective, and lacking sufficient granularity to effectively measure true risk exposure at a consolidated level. In almost all
cases, there was no clear delineation between the borrower and facility risk rating, and a disproportionate share of GMAC’s exposure was contained within one or two risk grades. It took considerable time just to collect borrower financial information for a central repository for analysis. A large part of this process involved developing a financial presentation for each borrower that was consistent and uniform and provided a meaningful basis for comparison. Using the existing legacy ratings as an initial base, a variety of statistical techniques then were used to sort borrowers into meaningful credit buckets that would conform to GMAC’s rating scale. This exercise involved identifying those qualitative and quantitative variables that proved to be the best discriminators of borrower creditworthiness. Because of the diversity of lending businesses, separate models had to be developed for each industry. The lack of good external benchmarks to validate the models necessitates close tracking of defaults and ratings migration within the portfolio. In addition, the major ratings agencies periodically provide ratings estimates on samples of different credits within GMAC’s portfolio to ensure that the internally assigned ratings are reasonable. While the current risk-rating models are quite good, refinement of probability-of-default estimates is an ongoing process and the need for continual validation is critical.

Because a large part of GMAC’s business is geared toward asset-based lending, loss given default is a particularly significant consideration from the standpoint of capturing the true risk profile of a lending transaction. Unfortunately, there is very little external information available and, for some types of collateral, very little historical experience, since the underlying collateral is relatively new. To be sure, much of the literature on recoveries to date has been geared toward large corporate borrowers, where defaults tend to be highly visible. A typical mortgage-warehouse-lending business has more than 30 potential collateral types, ranging from single-family prime and sub-prime mortgages to servicing rights and residuals. Frequently, the borrower will have multiple sub-limits or tranches under one revolving loan facility. Understandably, the LGD assumptions can vary dramatically and must be monitored diligently.

Obtaining meaningful LGD numbers is as much art as science and requires a considerable amount of creativity. Because GMAC is in the business of originating, financing, servicing, and securitizing many different types of assets (mortgages, autos, real estate, and distressed assets), good internal data does exist, although it is not always easily accessible. In cases where recovery information is particularly lacking, subjective LGD estimates are used with the aim of revising them over time as additional information becomes available.

For some types of collateral, however, reasonable external benchmarks do exist. Frequently, for instance, excellent market information is available on liquidation values based on asset sales of competitors that desire to exit a business, due either to changes in strategic direction or to financial distress. Because of legal and regulatory differences between different countries, recovery expectations also can differ dramatically—even for the same type of collateral, such as new or used cars. For instance, the LGD on a new vehicle is far less in the U.K. than it would be in either Mexico or France. Differences in the legal environment need to be explicitly incorporated into LGD estimates to reflect these differences in risk.

**Loan loss database.** A challenge in developing good LGD estimates is that obtaining historical loss information is largely a forensic exercise since many of the supplemental costs associated with a loan workout were rarely captured and defaults have been relatively infrequent over the past 10 years. So GMAC developed a second tool to capture this information—the Loan Loss Database, a centralized repository for collecting actual loss information that helps validate the internal risk-rating models and ensure accuracy of LGD estimates.

Building a loan loss database presented the challenges of finding a firm-wide definition of what constitutes a default and deciding how to capture and quantify both monetary and nonmonetary losses. In the past, losses had typically been defined as a loss of principal without regard to the true costs associated with a loan workout. Unlike some commercial banks, GMAC has a decentralized approach to working out a troubled loan. For the most part, workout situations are handled by
the individual business, which may or may not have a formalized workout group. To be useful for subsequent validation, this information had to be consolidated in a manner that was consistent across all GMAC subsidiaries.

Definitions aside, the collection of this information has required review of all existing policies and procedures to ensure that the right information is being captured and effectively integrated into the entire process. An enterprise-wide approach to developing common definitions and the repository itself has helped build support for the loan loss database during its development. GMAC is currently in the process of rolling out this repository throughout the organization.

Special Challenges for Nonbank Financial Service Companies.

While GMAC is subject to many of the same state and federal regulations affecting most large financial institutions, only portions of its business are directly affected by the proposed Basel II Capital Accord. Some of GMAC’s international operations, for example, which operate in 38 countries across the globe, are highly regulated by bank supervisory authorities and will need to be compliant with Basel II by 2006. In contrast, the North American auto operations are under no such constraint. In addition, GMAC owns a number of state and federally chartered banks that are also subject to Basel II to varying degrees. While Basel II has been an important driver in the implementation of credit risk portfolio management in many financial institutions to meet regulatory requirements, the proposed Accord provides a useful framework for implementing best-practice risk management practices throughout the company, which is generally consistent with the risk management framework that GMAC has been working to develop.

Another important difference between GMAC and other financial services firms is that, because GMAC is a wholly owned subsidiary of General Motors Corporation, one core business is to provide financing for dealers and retail customers interested in purchasing GM cars and trucks. This to some degree limits flexibility when compared with other financial institutions engaged in the same type of lending. While risk/return considerations are always very important, they need to be balanced against the need to support the sales of GM products and services.

Lastly, best-practice credit risk management calls for a clear differentiation between the borrower risk rating, which indicates the probability of default, and more structural considerations, such as tenor, guarantees, and collateral, that make up the facility rating. This to some degree limits flexibility when compared with other financial institutions engaged in the same type of lending. While risk/return considerations are always very important, they need to be balanced against the need to support the sales of GM products and services.

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Conclusion

A specialized form of financing, ABL is specifically geared to the small to medium-sized firm, which more often than not is thinly capitalized but has a strong asset base. While ABL lends itself to some of the same type of analytics used to manage large corporate loans, the lack of good external benchmarks and the specialized nature of the industry require a considerable amount of customization, particularly with respect to loss given default.

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